CORArchitecture

NEO 4-PACK

L1	40' x 100'	MID-BLOCK
BLACK HAT	NO DEPARTURES	

PROJECT DATA

COMPONENT	AMOUNT
LOT SIZE	4000
FAR	1.10
NUMBER OF UNITS	3
TOTAL GROSS SQUARE FOOTAGE	4743
NUMBER OF PARKING STALLS	3
TYPE OF PARKING	PRIVATE GARAGES
OPEN SPACE TOTAL	0
OPEN SPACE AT GRADE	0
OPEN SPACE ABOVE GRADE	0
AMENITY SPACE SQUARE FOOTAGE	240
GREEN FACTOR (attach calculations)	0.60
LOT COVERAGE (SF)	40.0%
BUILDING HEIGHT/ROOF PEAK	35'-0"
IMPERVIOUS SURFACE	72.0%
OPEN SPACE/LOT SIZE RATIO	0.0%
UNIT DENSITY (UNITS PER LOT AREA)	1 UNIT/ 1333SF

ENABLING FACTORS:
1. The lack of an open space requirement makes it very easy for this scheme to maximize FAR without building over the parking court.

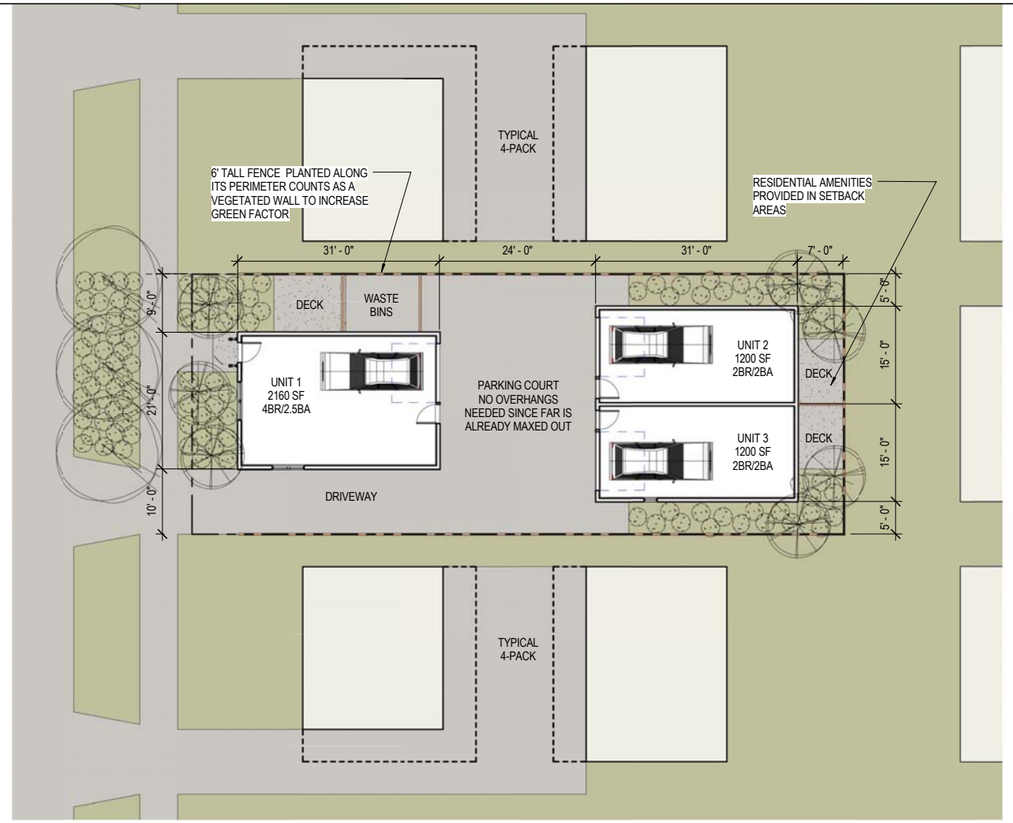
GATING MECHANISMS:
1. Since L1 only allows a 1.1 FAR, this scheme can't get any bigger.

COST FACTORS:
1. This building is easier to construct than the heavily cantilevered version built under today's code.

EVALUATION:
1. At FAR 1.1 there is not enough development potential in the site to tempt builders to overhang the parking court.
2. While the parking court is improved, this scheme provides no quality open space for residents.
3. Green factor drives builders to maximize the two least costly strategies: a) Heavily landscape all available dirt, and; b) provide the remainder of green factor using vegetated walls. The result is: a) relatively unusable open space, and; b) a profusion of unmaintainable surfaces

GREEN FACTOR

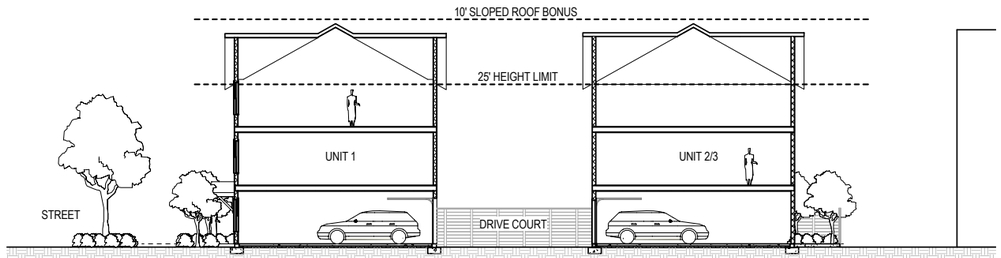
LANDSCAPE ELEMENT	NUM	AREA (SF)	FACTOR	TOTAL
LANDSCAPED AREA W/ SOIL DEPTH LESS THAN 24"		0	0.1	0.0
LANDSCAPED AREA W/ 24" OF SOIL OR GREATER		1004	0.6	602.4
BIORETENTION FACILITIES		0	1.0	0.0
GROUND COVERS OR PLANTS LESS THAN 2' AT MATURITY		0	0.1	0.0
SHRUBS OR PERENNIALS 2'+ AT MATURITY		1004	0.3	301.2
NUMBER OF SMALL TREES		50	0.3	0.0
NUMBER OF SMALL/MEDIUM TREES	7	100	0.3	210.0
NUMBER OF MEDIUM/LARGE TREES	3	150	0.4	180.0
NUMBER OF LARGE TREES		200	0.4	0.0
NUMBER OF LARGE TREES PRESERVED			0.8	0.0
GREEN ROOF BETWEEN 2" AND 4" OF GROWTH MEDIUM			0.4	0.0
GREEN ROOF OF AT LEAST 4" OF GROWTH MEDIUM		0	0.7	0.0
VEGETATED WALLS		1350	0.7	945.0
APPROVED WATER FEATURES			0.7	0.0
PERMEABLE PAVING OVER BETWEEN 6" AND 24" OF SOIL OR GRAVEL		0	0.2	0.0
PERMEABLE PAVING OVER AT LEAST 24" OF SOIL OR GRAVEL		0	0.5	0.0
STRUCTURAL SOIL SYSTEMS			0.2	0.0
BONUS				
DROUGHT TOLERANT OR NATIVE PLANT SPECIES		1004	0.1	100.4
LANDSCAPED AREA > 50% IRRIGATION BY HARVESTED RAINWATER			0.2	0.0
LANDSCAPING VISIBLE FROM RIGHT OF WAY OR PUBLIC OPEN SPACES		554	0.1	55.4
LANDSCAPING IN FOOD CULTIVATION			0.1	0.0
GREEN FACTOR NUMERATOR				2394.4
PARCEL SIZE				4000
TOTAL GREEN FACTOR				**0.60**



SITE PLAN SCALE: 3/32" = 1'-0"

B1

CROSS SECTION SCALE: 3/32" = 1'-0"



LONGITUDINAL SECTION SCALE: 3/32" = 1'-0"

CORArchitecture

MAXIMIZED 4-PACK

L3	40' x 100'	MID-BLOCK
BLACK HAT	NO DEPARTURES	

B2

PROJECT DATA

COMPONENT	AMOUNT
LOT SIZE	4000
FAR	1.42
NUMBER OF UNITS	4
TOTAL GROSS SQUARE FOOTAGE	6097
NUMBER OF PARKING STALLS	3
TYPE OF PARKING	PRIVATE GARAGES
OPEN SPACE TOTAL	0
OPEN SPACE AT GRADE	0
OPEN SPACE ABOVE GRADE	0
AMENITY SPACE SQUARE FOOTAGE	555
GREEN FACTOR (attach calculations)	0.60
LOT COVERAGE (SF)	54.9%
BUILDING HEIGHT/ROOF PEAK	39'-1"
IMPERVIOUS SURFACE	81.6%
OPEN SPACE/LOT SIZE RATIO	0.0%
UNIT DENSITY (UNITS PER LOT AREA)	1 UNIT/ 1000SF

ENABLING FACTORS:
1. The code is intended to create a 3' maximum overhang for the parking aisle between structures. This intent is subverted by joining the buildings into one structure.
2. Setback averaging helps this scheme. A generous setback at the bridging structure in the parking court allows the rest of the structures to stay at a 5' setback, maximizing building frontage & development potential.
3. Residential amenities are easily fit into the narrow setbacks.
4. The 20% parking reduction is used to create a fourth unit that could not otherwise find a parking space.

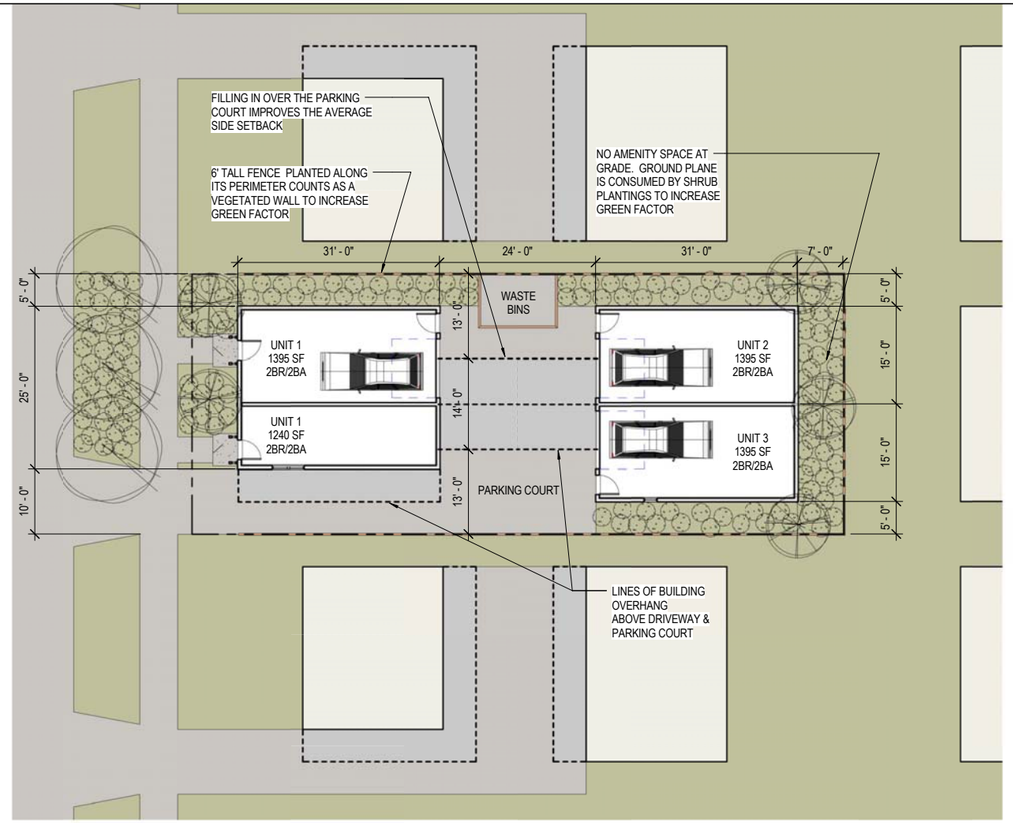
GATING MECHANISMS:
1. This scheme naturally peaks out at about 1.4 FAR, which is the set limit for the zone.

COST FACTORS:
1. Joining the buildings into one structure will trigger slightly more expensive fire-rated construction standards (SBC).

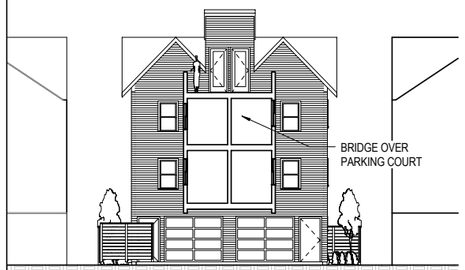
EVALUATION:
1. An FAR of 1.4 appears to be too high for three story ground-based housing on a small site. The lack of an open space requirement permits very high levels of lot coverage and impervious surface.
2. Green factor drives builders to maximize the two least costly strategies: a) Heavily landscape all available dirt, and; b) provide the remainder of green factor using vegetated walls. As a result, what little open space exists is relatively unusable, and the projects feature a profusion of unmaintainable vertical surfaces.
3. Residential amenities are easily satisifed by the provision of relatively meaningless bits of open space.

GREEN FACTOR

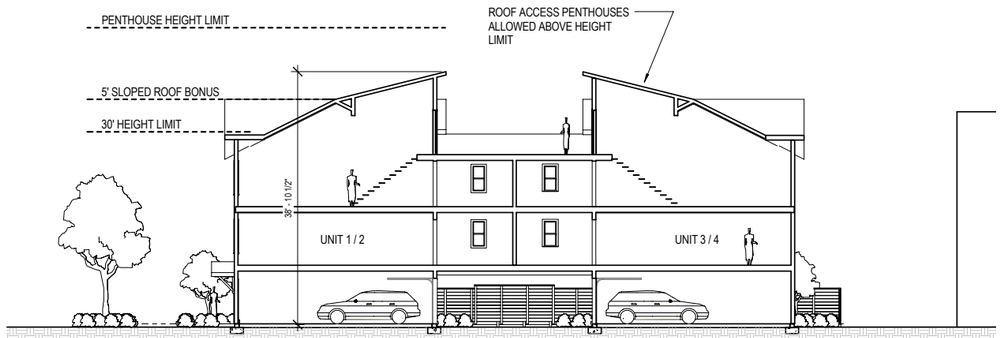
LANDSCAPE ELEMENT	NUM	AREA (SF)	FACTOR	TOTAL
LANDSCAPED AREA W/ SOIL DEPTH LESS THAN 24"		0	0.1	0.0
LANDSCAPED AREA W/ 24" OF SOIL OR GREATER		1286	0.6	771.6
BIORETENTION FACILITIES		0	1.0	0.0
GROUND COVERS OR PLANTS LESS THAN 2' AT MATURITY		0	0.1	0.0
SHRUBS OR PERENINIALS 2'+ AT MATURITY		1286	0.3	358.8
NUMBER OF SMALL TREES		50	0.3	0.0
NUMBER OF SMALL/MEDIUM TREES	7	100	0.3	210.0
NUMBER OF MEDIUM/LARGE TREES	3	150	0.4	180.0
NUMBER OF LARGE TREES		200	0.4	0.0
NUMBER OF LARGE TREES PRESERVED			0.8	0.0
GREEN ROOF BETWEEN 2" AND 4" OF GROWTH MEDIUM			0.4	0.0
GREEN ROOF OF AT LEAST 4" OF GROWTH MEDIUM		0	0.7	0.0
VEGETATED WALLS		950	0.7	665.0
APPROVED WATER FEATURES			0.7	0.0
PERMEABLE PAVING OVER BETWEEN 6" AND 24" OF SOIL OR GRAVEL		0	0.2	0.0
PERMEABLE PAVING OVER AT LEAST 24" OF SOIL OR GRAVEL		0	0.5	0.0
STRUCTURAL SOIL SYSTEMS			0.2	0.0
BONUS				
DROUGHT TOLERANT OR NATIVE PLANT SPECIES		1286	0.1	128.6
LANDSCAPED AREA > 50% IRRIGATION BY HARVESTED RAINWATER			0.2	0.0
LANDSCAPING VISIBLE FROM RIGHT OF WAY OR PUBLIC OPEN SPACES		665	0.1	66.5
LANDSCAPING IN FOOD CULTIVATION			0.1	0.0
GREEN FACTOR NUMERATOR				2407.5
PARCEL SIZE				4000
TOTAL GREEN FACTOR				**0.60**



SITE PLAN SCALE: 3/32" = 1'-0"



CROSS SECTION SCALE: 3/32" = 1'-0"



LONGITUDINAL SECTION SCALE: 3/32" = 1'-0"

CORArchitecture

DOUBLE LOADED CARPORT

L3	60' x 120'	MID-BLOCK
BLACK HAT	NO DEPARTURES	

B3

PROJECT DATA

COMPONENT	AMOUNT
LOT SIZE	7200
FAR	1.40
NUMBER OF UNITS	8
TOTAL GROSS SQUARE FOOTAGE	10876
NUMBER OF PARKING STALLS	8
TYPE OF PARKING	ON-GRADE
OPEN SPACE TOTAL	0
OPEN SPACE AT GRADE	0
OPEN SPACE ABOVE GRADE	0
AMENITY SPACE SQUARE FOOTAGE	564
GREEN FACTOR (attach calculations)	0.60
LOT COVERAGE (SF)	62.2%
BUILDING HEIGHT/ROOF PEAK	35'-0"
IMPERVIOUS SURFACE	85.4%
OPEN SPACE/LOT SIZE RATIO	0.0%
UNIT DENSITY (UNITS PER LOT AREA)	1 UNIT/ 900SF

ENABLING FACTORS:
1. The code is intended to create a 3' maximum overhang for the parking aisle between structures. The intent of the code is subverted by joining the buildings into one structure.
2. Automobiles are housed in carports because unenclosed space does not count as FAR.
3. Residential amenities are easily fit into the narrow setbacks.

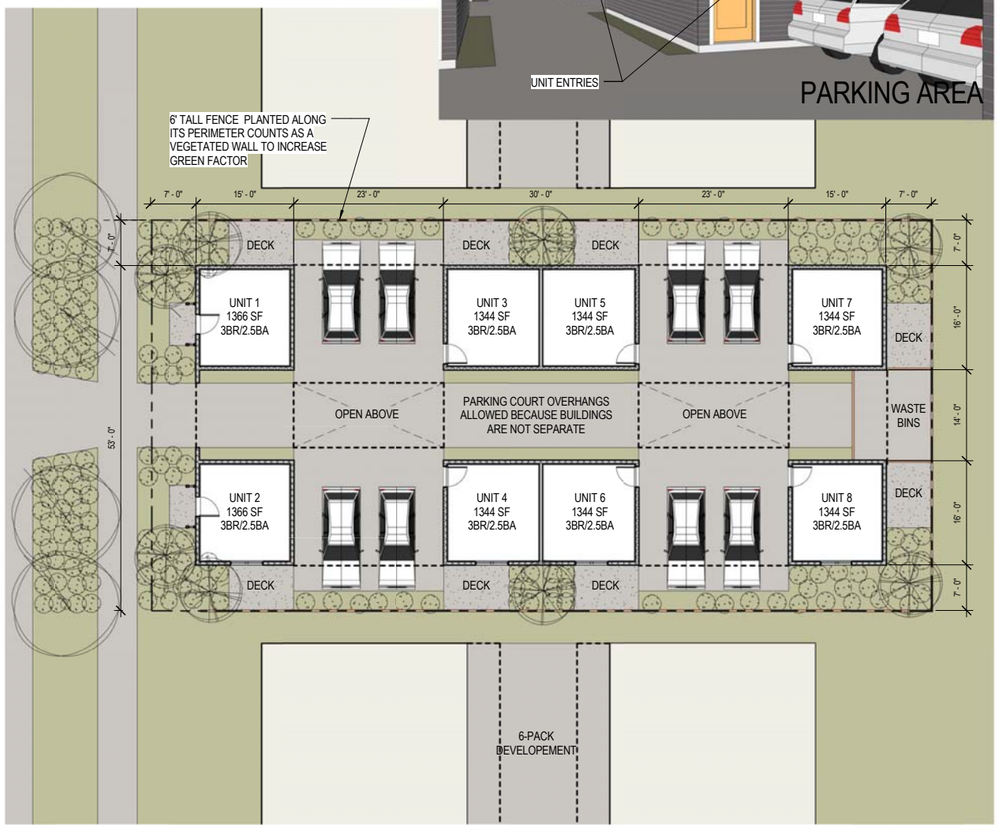
GATING MECHANISMS:
1. This scheme attempts to fill all of the available land inside of the 7' average setback. Ultimately is it limited by the FAR maximum, and by automobile maneuvering requirements.

COST FACTORS:
1. Joining the buildings into one structure will trigger slightly more expensive fire-rated construction standards (SBC).

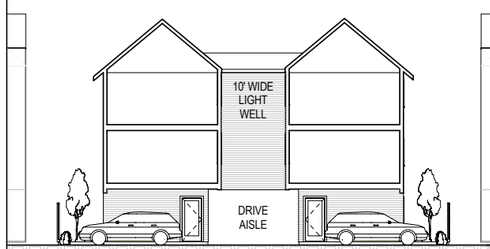
EVALUATION:
1. An FAR of 1.4 may to be too high for three story ground-based housing. The lack of an open space requirement permits very high levels of lot coverage and impervious surface. Green factor and residential amenities do not provide a meaningful gating mechanism.
2. Green factor drives builders to maximize the two least costly strategies: a) Heavily landscape all available dirt, and; b) provide the remainder of green factor using vegetated walls. As a result, what little open space exists is relatively unusable, and the projects feature a profusion of unmaintainable vertical surfaces.
3. This scheme provides 2 more units and about 12% more saleable floor area than a comprable 1.4 FAR six-pack configuration.

GREEN FACTOR

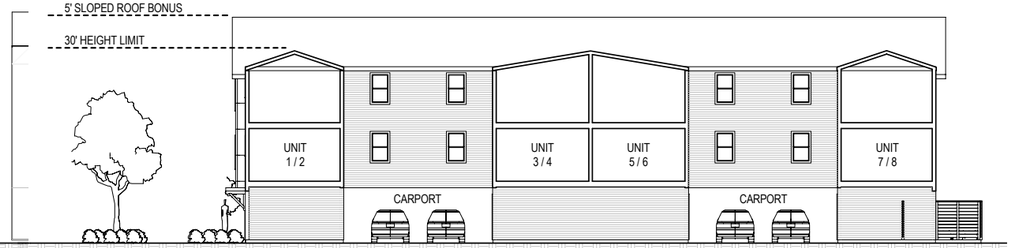
LANDSCAPE ELEMENT	NUM	AREA (SF)	FACTOR	TOTAL
LANDSCAPED AREA W/ SOIL DEPTH LESS THAN 24"			0.1	0.0
LANDSCAPED AREA W/ 24" OF SOIL OR GREATER		1746	0.6	1047.6
BIORETENTION FACILITIES			1.0	0.0
GROUND COVERS OR PLANTS LESS THAN 2' AT MATURITY			0.1	0.0
SHRUBS OR PERENNIALS 2' + AT MATURITY		1746	0.3	523.8
NUMBER OF SMALL TREES		50	0.3	0.0
NUMBER OF SMALL/MEDIUM TREES	8	100	0.3	240.0
NUMBER OF MEDIUM/LARGE TREES	4	150	0.4	240.0
NUMBER OF LARGE TREES		200	0.4	0.0
NUMBER OF LARGE TREES PRESERVED			0.8	0.0
GREEN ROOF BETWEEN 2" AND 4" OF GROWTH MEDIUM			0.4	0.0
GREEN ROOF OF AT LEAST 4" OF GROWTH MEDIUM			0.7	0.0
VEGETATED WALLS (1800 sf on fence + 1100 sf on sides of building)		2900	0.7	2030.0
APPROVED WATER FEATURES			0.7	0.0
PERMEABLE PAVING OVER BETWEEN 6" AND 24" OF SOIL OR GRAVEL			0.2	0.0
PERMEABLE PAVING OVER AT LEAST 24" OF SOIL OR GRAVEL			0.5	0.0
STRUCTURAL SOIL SYSTEMS			0.2	0.0
BONUS				
DROUGHT TOLERANT OR NATIVE PLANT SPECIES		1746	0.1	174.6
LANDSCAPED AREA > 50% IRRIGATION BY HARVESTED RAINWATER			0.2	0.0
LANDSCAPING VISIBLE FROM RIGHT OF WAY OR PUBLIC OPEN SPACES		940	0.1	94.0
LANDSCAPING IN FOOD CULTIVATION			0.1	0.0
GREEN FACTOR NUMERATOR				4350.0
PARCEL SIZE				7200
TOTAL GREEN FACTOR				**0.60**



SITE PLAN SCALE: 3/32" = 1'-0"



CROSS SECTION SCALE: 3/32" = 1'-0"



LONGITUDINAL SECTION SCALE: 3/32" = 1'-0"

STREET VIEW

BIRDS EYE VIEW

CORArchitecture

10 UNIT APARTMENT

L3	60' x 120'	MID-BLOCK
BLACK HAT	NO DEPARTURES	

PROJECT DATA

COMPONENT		AMOUNT
LOT SIZE		7200
FAR		1.35
NUMBER OF UNITS		10
TOTAL GROSS SQUARE FOOTAGE		10439
NUMBER OF PARKING STALLS		10
TYPE OF PARKING	Surface lot under Bldg.	
OPEN SPACE TOTAL		520
OPEN SPACE AT GRADE		520
OPEN SPACE ABOVE GRADE		0
AMENITY SPACE SQUARE FOOTAGE		520
GREEN FACTOR (attach calculations)		0.60
LOT COVERAGE (SF)		62.6%
BUILDING HEIGHT/ROOF PEAK		30'-0"
IMPERVIOUS SURFACE		62.6%
OPEN SPACE/LOT SIZE RATIO		7.2%
UNIT DENSITY (UNITS PER LOT AREA)	1 unit per:	720 SF

ENABLING FACTORS:

1. Overhang limits on Auto courts do not apply to a single building scenario
2. Common open space allows the lack of balconies or ground related unit entries
3. Impervious surface area reduces by the use of pervious paving wherever possible

GATING MECHANISMS:

1. The surface parking is very desirable to control costs but limits the number of units because of the space required and the development standards for parking lots. With a parking reduction the same building would likely hold more smaller units.
2. Building code would make units with only side facing exposure difficult because of limitations on openings
3. Scheme could be difficult to adapt to sloping conditions.
4. Green Factor not achieved as shown.

COST FACTORS:

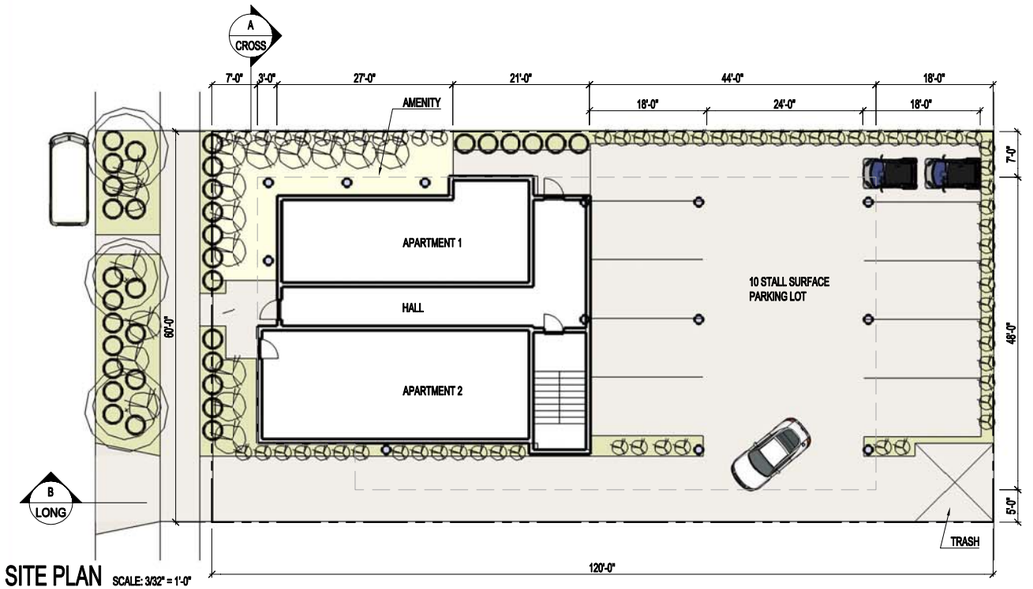
1. Surface parking is a major cost control decision
2. Three story wood construction is very cost effective and 10 unit max. avoids fair housing issues to cut costs further

EVALUATION:

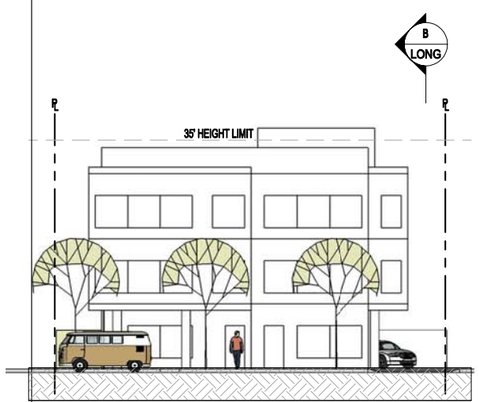
1. This green factor relies heavily on vegetated walls which given too much weight in the equation. Vegitated walls have a poor survival rate and, while they may be appropiate in some designs should not be artificially encouraged to this degree.
2. Units are larger than typical in the market because FAR allows more development than can be cheaply parked
3. Boxy massing will not conform to many neighborhoods design preferences for a "traditional" look.

GREEN FACTOR

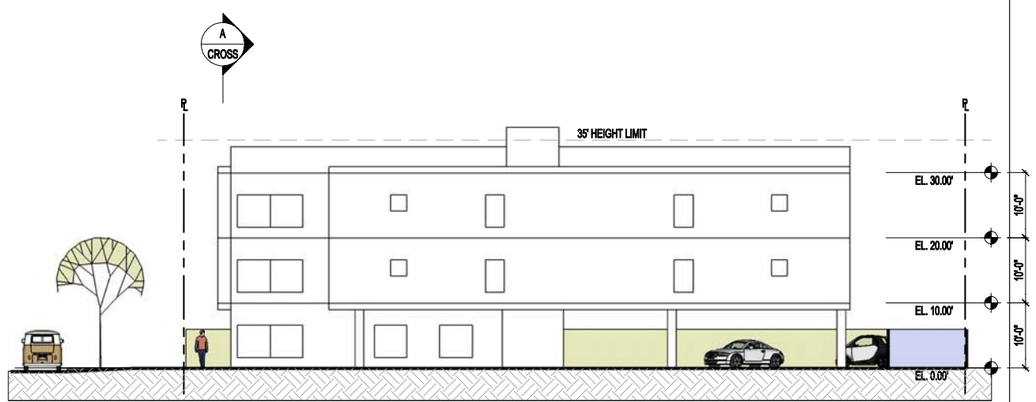
LANDSCAPE ELEMENT	NUM	AREA (SF)	FACTOR	TOTAL
LANDSCAPED AREA W SOIL DEPTH LESS THAN 24"		0	0.1	0.0
LANDSCAPED AREA W 24" OF SOIL OR GREATER		1355	0.6	813.0
BIORETENTION FACILITIES		0	1.0	0.0
GROUND COVERS OR PLANTS LESS THAN 2' AT MATURITY		1355	0.1	135.5
SHRUBS OR PERENINIALS 2'+ AT MATURITY		1000	0.3	300.0
NUMBER OF SMALL TREES	1	50	0.3	15.0
NUMBER OF SMALL/MEDIUM TREES	2	100	0.3	60.0
NUMBER OF MEDIUM/LARGE TREES	3	150	0.4	180.0
NUMBER OF LARGE TREES	0	200	0.4	0.0
NUMBER OF LARGE TREES PRESERVED			0.8	0.0
GREEN ROOF BETWEEN 2" AND 4" OF GROWTH MEDIUM			0.4	0.0
GREEN ROOF OF AT LEAST 4" OF GROWTH MEDIUM		0	0.7	0.0
VEGETATED WALLS		3000	0.7	2100.0
APPROVED WATER FEATURES			0.7	0.0
PERMEABLE PAVING OVER BETWEEN 6" AND 24" OF SOIL OR GRAVEL		0	0.2	0.0
PERMEABLE PAVING OVER AT LEAST 24" OF SOIL OR GRAVEL		1090	0.5	545.0
STRUCTURAL SOIL SYSTEMS			0.2	0.0
BONUS				
DROUGHT TOLERANT OR NATIVE PLANT SPECIES		1000	0.1	100.0
LANDSCAPED AREA > 50% IRRIGATION BY HARVESTED RAINWATER			0.2	0.0
LANDSCAPING VISIBLE FROM RIGHT OF WAY OR PUBLIC OPEN SPACES		500	0.1	50.0
LANDSCAPING IN FOOD CULTIVATION		0	0.1	0.0
GREEN FACTOR NUMERATOR				4298.5
PARCEL SIZE				7200
TOTAL GREEN FACTOR				0.60



SITE PLAN SCALE: 3/32" = 1'-0"

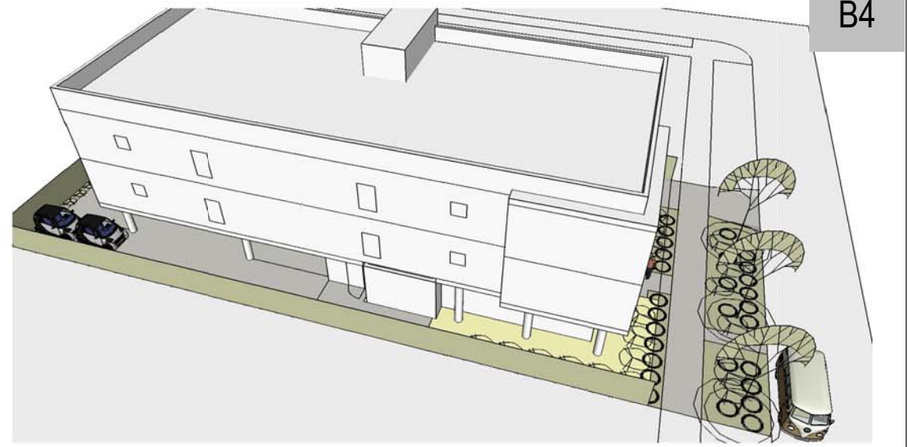


CROSS SECTION SCALE: 3/32" = 1'-0"



LONGITUDINAL SECTION SCALE: 3/32" = 1'-0"

B4



BIRDS EYE VIEW

STREET VIEW

BIRDS EYE VIEW

CORArchitecture

24 UNIT APARTMENT

L3	60' x 120'	MID-BLOCK
BLACK HAT	NO DEPARTURES	

PROJECT DATA

COMPONENT	AMOUNT
LOT SIZE	7200
FAR	1.88
NUMBER OF UNITS	24
TOTAL GROSS SQUARE FOOTAGE	14570
NUMBER OF PARKING STALLS	0
TYPE OF PARKING	None
OPEN SPACE TOTAL	1360
OPEN SPACE AT GRADE	1360
OPEN SPACE ABOVE GRADE	0
AMENITY SPACE SQUARE FOOTAGE	1360
GREEN FACTOR (attach calculations)	0.58
LOT COVERAGE (SF)	68.3%
BUILDING HEIGHT/ROOF PEAK	30'-0"
IMPERVIOUS SURFACE	74.0%
OPEN SPACE/LOT SIZE RATIO	18.9%
UNIT DENSITY (UNITS PER LOT AREA)	1 unit per: 300 SF

ENABLING FACTORS:

1. Scheme assumes FAR bonus for affordable housing and Station Area Parking reductions but intentionally does not take advantage of available height bonus
2. Common open space allows the lack of balconies or ground related unit entries

GATING MECHANISMS:

1. Max FAR of 2.0 is not achievable but the added cost of a 4th story would not justify the small amount of SF that could be added in a taller building.
2. Building code would make units with only side facing exposure difficult because of limitations on openings
3. Scheme could be difficult to adapt to sloping conditions.

COST FACTORS:

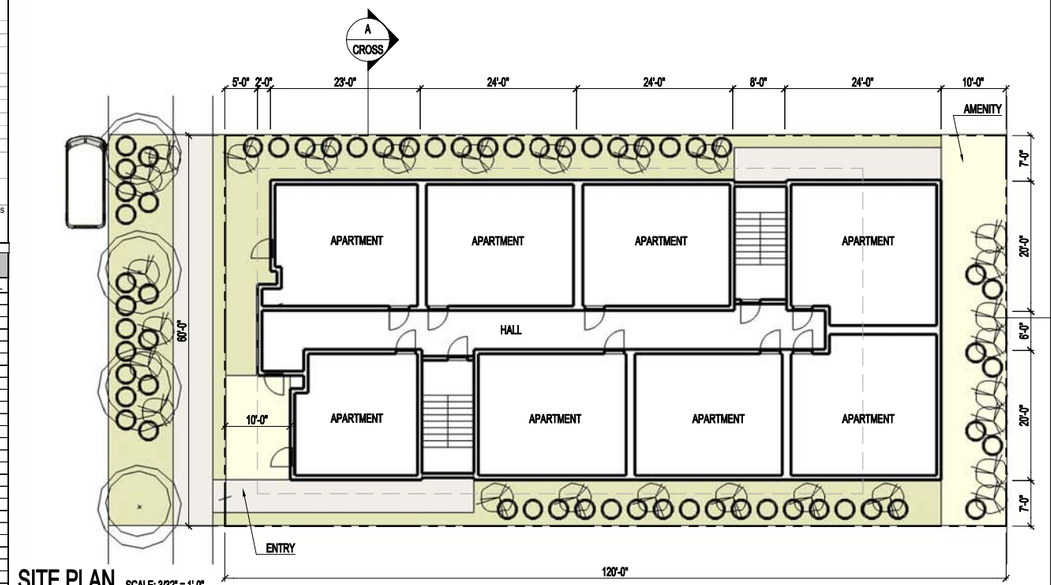
1. Construction cost is controlled by keeping building at 3 stories despite a small amount of lost FAR
2. Lack of parking is a significant cost savings

EVALUATION:

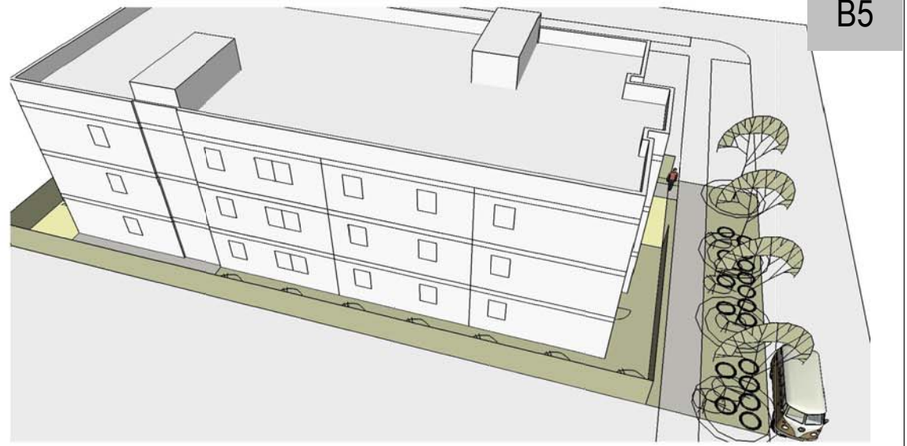
1. Green factor surprisingly easy to achieve in a building that appears to have little landscape area. Lack of paving is the primary reason for this.
2. Boxy massing will not conform to many neighborhoods design preferences for a "traditional" look. Forced articulation is inconsistent with actual historical examples of this type which are very simple and tend to be well liked.
3. While most would consider this a Black Hat scheme it is actually very similar to many well liked historic apartment buildings and could be entirely appropriate on dense urban center sites or in neighborhoods with a mix of housing types and good transi

GREEN FACTOR

LANDSCAPE ELEMENT	NUM	AREA (SF)	FACTOR	TOTAL
LANDSCAPED AREA W SOIL DEPTH LESS THAN 24"		0	0.1	0.0
LANDSCAPED AREA W 24" OF SOIL OR GREATER		2642	0.6	1585.2
BIORETENTION FACILITIES		0	1.0	0.0
GROUND COVERS OR PLANTS LESS THAN 2' AT MATURITY		2642	0.1	264.2
SHRUBS OR PERENINIALS 2'+ AT MATURITY		2400	0.3	720.0
NUMBER OF SMALL TREES	0	50	0.3	0.0
NUMBER OF SMALL/MEDIUM TREES	0	100	0.3	0.0
NUMBER OF MEDIUM/LARGE TREES	4	150	0.4	240.0
NUMBER OF LARGE TREES	0	200	0.4	0.0
NUMBER OF LARGE TREES PRESERVED			0.8	0.0
GREEN ROOF BETWEEN 2" AND 4" OF GROWTH MEDIUM			0.4	0.0
GREEN ROOF OF AT LEAST 4" OF GROWTH MEDIUM		0	0.7	0.0
VEGETATED WALLS		1560	0.7	1092.0
APPROVED WATER FEATURES			0.7	0.0
PERMEABLE PAVING OVER BETWEEN 6" AND 24" OF SOIL OR GRAVEL		0	0.2	0.0
PERMEABLE PAVING OVER AT LEAST 24" OF SOIL OR GRAVEL		200	0.5	100.0
STRUCTURAL SOIL SYSTEMS			0.2	0.0
BONUS				
DROUGHT TOLERANT OR NATIVE PLANT SPECIES		2400	0.1	240.0
LANDSCAPED AREA > 50% IRRIGATION BY HARVESTED RAINWATER			0.2	0.0
LANDSCAPING VISIBLE FROM RIGHT OF WAY OR PUBLIC OPEN SPACES		500	0.1	50.0
LANDSCAPING IN FOOD CULTIVATION		0	0.1	0.0
GREEN FACTOR NUMERATOR				4291.4
PARCEL SIZE				7200
TOTAL GREEN FACTOR				0.60

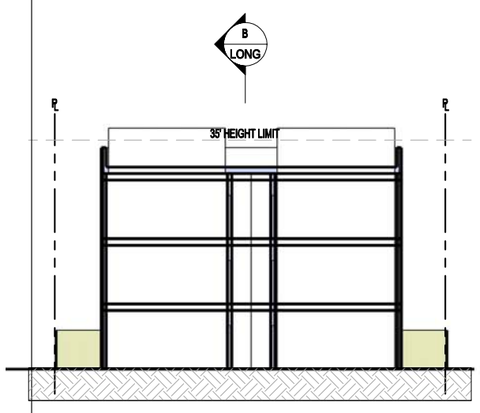


SITE PLAN SCALE: 3/32" = 1'-0"

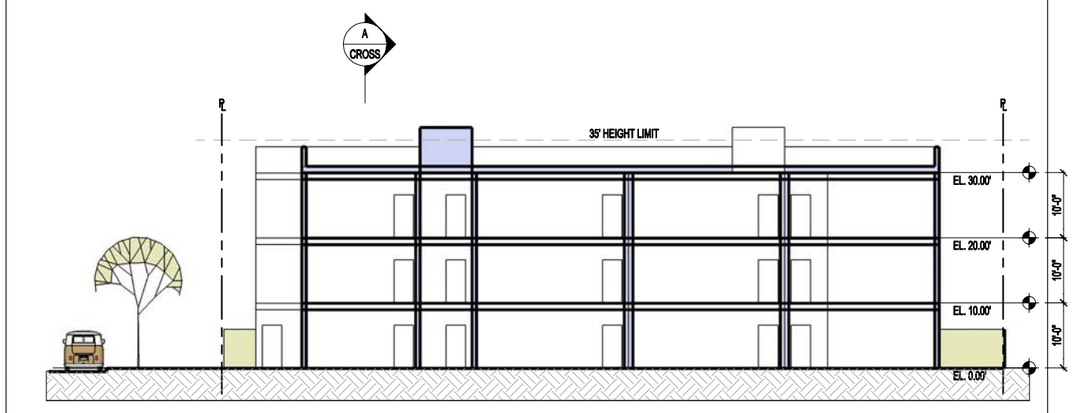


BIRDS EYE VIEW

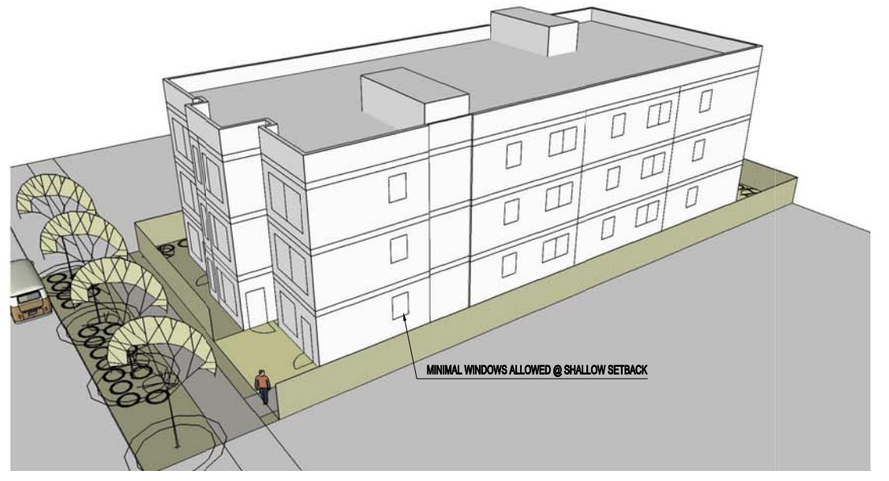
STREET VIEW



CROSS SECTION SCALE: 3/32" = 1'-0"



LONGITUDINAL SECTION SCALE: 3/32" = 1'-0"



BIRDS EYE VIEW